

Studies on spiders of the genus *Zygeilla* Cambridge from India (Araneae : Araneidae)

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Abstract. The genus *Zygeilla* is being reported for the first time in India in this paper. Previously one species *melanocrania* was placed erroneously in the genus *Araneus*. But our examination has revealed that it should be placed in the genus *Zygeilla*. Gravely collected this species from Barkuda Island (Chilka Lake), Orissa and deposited in Zoological Survey of India, Calcutta. We have got another new species of this genus, namely *Zygeilla indica*, which is described and illustrated in this paper.

Keywords. Araneidae; *Zygeilla melanocrania* (Thorell); *Z. indica* sp. nov.

1. Introduction

The spiders of the family Araneidae (= Argiopidae) are well-known from India but the genus *Zygeilla* was not reported so far from our country. Only one species was recorded wrongly by Dyal (1935) as *Araneus melarocrania* (Thorell) from Lahore, Panjab, now Pakistan. While examining the spider collection from different parts of India including Poona, we found one known species *melanocrania* which was wrongly placed in *Araneus*, and a new species of the interesting genus *Zygeilla* F.O.P. Cambridge which is described and illustrated in this paper. The type-specimens will be deposited in the National Collection of Zoological Survey of India, Calcutta.

2. *Zygeilla melanocrania* (Thorell)

1887. *Epeira melanocrania* Thorell, *Ann. Mus. Civ. Genova*, 25: 209.

1921. *Araneus melanocrania*: Gravely, *Rec. Indian Mus.*, 22 (4): 415.

1935. *Araneus melanocrania*: Dyal, *Bull. Zool. Panjab Univ.*, 1: 183.

2.1. General

Cephalic region dark brown with some black patches and thoracic region yellowish in colour, legs pale in colour, abdomen whitish with black markings forming a folium. Total length 5.50 mm. Carapace 2.10 mm. long, 1.90 mm. wide; abdomen 3.95 mm. long, 3.15 mm. wide.

2.2. Cephalothorax

Longer than wide, narrowing in front; cephalic region with very few hairs and darker in colour than thoracic region as in figure 1. Ocular quad slightly longer than wide and wider in front than behind as in figure 1; anterior median eyes larger than posterior medians; laterals are sub-equal in size, close and situated on prominent tubercles; both rows of eyes recurved but posterior row very narrowly recurved as in figure 1. Sternum heart-shaped, pointed behind, pale yellowish with no markings, clothed with hairs, labium slightly wider than long, light brownish with pale distal end; maxillae broad, light brownish yellow and provided with distinct scopulae. Chelicerae moderately strong, deep brownish, provided with distinct boss. Legs moderately long and strong, clothed with hairs and spines.

2.3. Abdomen

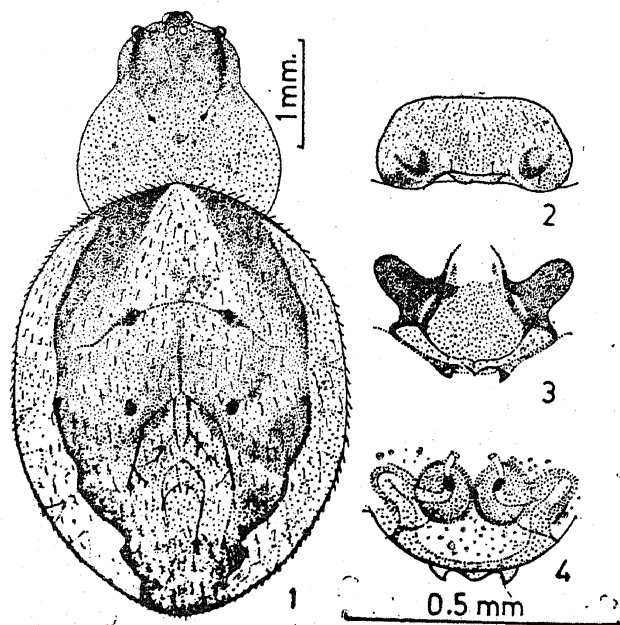
Oval, longer than wide with no humps and clothed with hairs as in figure 1. Dorsum of abdomen having a distinct folium composed of black and white patches as in figure 1. Ventral side with white pigmentation. Epigynum with no scape, having semicircular openings on the ventral side as in figure 2. Internal genitalia as in figure 4.

2.4. Distribution

India: Barkuda Island (Chilka Lake), Orissa. Pakistan: Model Town, Lahore. Burma.

2.5. Remarks

Description and illustrations are based on authenticated identified specimen deposited at Zoological Survey of India, Calcutta, Regd. No. 2825/H₂.



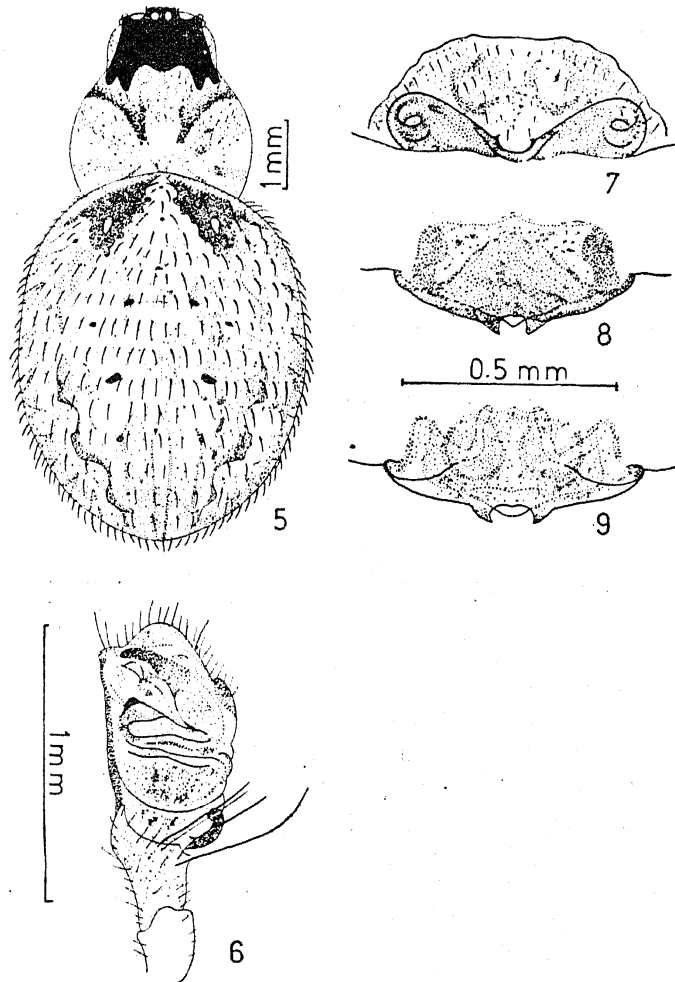
Figures 1-4. *Zygeilla melanocrania* (Thorell). 1. Dorsal view of female, legs omitted. 2. Epigynum, ventral view. 3. Epigynum, posterior view. 4. Internal genitalia, posterior view.

3. *Zygeilla indica* sp. nov.**3.1. General**

Cephalic region blackish brown and thoracic region yellowish in colour, legs yellowish with some brownish patches, abdomen whitish with light brownish tint and some black markings forming a folium. Total length 7.80 mm. Carapace 3.20 mm. long, 2.70 mm. wide; abdomen 5.40 mm. long, 4.35 mm. wide.

3.2. Cephalothorax

Longer than wide, narrowing in front, cephalic region with very few hairs and darker in colour than thoracic region. Ocular quad nearly as long as wide and wider in front than behind as in figure 5; anterior median eyes larger than posterior medians and laterals subequal in size and situated on prominent tubercles; both rows of eyes recurved but posterior row very narrowly recurved as in figure 5. Sternum heart-shaped, pointed behind, yellowish brown in colour with no markings, clothed with hairs; labium slightly wider than long, pale brown



Figures 5-9. *Zygeilla indica* sp. nov. 5. Dorsal view of female, legs omitted. 6. Ventral view of left palp. 7. Epigynum, ventral view. 8. Epigynum, posterior view. 9. Internal genitalia, posterior view.

in colour; maxillae broad, pale brown in colour and provided with distinct scopulae. Chelicerae moderately strong, blackish brown in colour, having distinct boss. Legs moderately long and strong, clothed with hairs and spines, distal ends of femora with dark brown patches on the dorsal surface. Male palp as in figure 6.

3.3. *Abdomen*

Oval, longer than wide with no humps and clothed with hairs as in figure 5. Dorsum of abdomen having a distinct folium composed of black and pale patches and small lines at the periphery as in figure 5. Ventral side with white, pigmentation in between epigastric furrow and the spinnerets. Epigynum with no scape, having spiral openings on the ventral side as in figure 7. Internal genitalia as in figure 9.

3.4. *Holotype*

One female in spirit, *paratype* eleven females in spirit, *allotype* five males in spirit.

3.5. *Type-locality*

Botanical Survey of India Compound, 7, Koregaon Park, Poona, Maharashtra, India. Coll. B. K. Tikader, 3-3-1978.

4. *Discussion*

This species is closely associated with *Zygeilla melanocrania* (Thorell) but differs as follows: (i) Cephalic region is darker in colour than in *melanocrania*. (ii) Epigynum with spiral openings, but in *melanocrania* the openings are semi-circular and not spiral. (iii) In internal genitalia, the ducts of spermathecae are different in both the species.

Acknowledgements

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References

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Gravely F H 1921 The spiders and scorpions of Barkuda Island; *Rec. Indian Mus.* 22 (4) 399-421